

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1.043.010 WO		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/NL2004/000198		International filing date (day/month/year) 23.03.2004		Priority date (day/month/year) 25.03.2003
International Patent Classification (IPC) or national classification and IPC H05B3/22, H05B3/34				
Applicant FERRO TECHNIEK HOLDING B.V.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 25.01.2005		Date of completion of this report 20.06.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Taccoen, J-F Telephone No. +31 70 340-3405		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-7 as originally filed

Claims, Numbers

1-10 received on 26.01.2005 with letter of 25.01.2005

Drawings, Sheets

1/1 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3-5,8
	No: Claims	1,2,6,7,9,10
Inventive step (IS)	Yes: Claims	1,2,6-10
	No: Claims	3-5
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following documents:

D1: US-B1-6 353 707 (LOKTEV IRINA ET AL) 5 March 2002 (2002-03-05)

D2: US-A-4 310 745 (BENDER JOSEPH) 12 January 1982 (1982-01-12)

2. The present application does not appear to meet the requirements of Article 33(2) PCT, because the subject-matter of claims 1, 2, 6, 7, 9, 10 does not appear to be new.

3. The present application does not appear to meet the requirements of Article 33(3) PCT, because the subject-matter of claims 3-5 does not appear to involve an inventive step.

4. With respect to claim 1, the document D1 discloses (the references in parentheses applying to this document):

Heating assembly (Fig. 7), comprising:

- a carrier with a heating surface (Fig. 7, ref. 53),

- at least one heating element arranged on the carrier on the side opposite to the heating surface (Fig. 7, ref. 50, 51, 54), and
- an at least substantially form retaining support member engaging on the carrier on the side of the opposite to the heating surface (Fig. 7, ref. 55)
wherein
the heating element is a track-like resistor (Fig. 2, ref. 22, 50), and the carrier is flexible (Col. 8, lines 14, 15).

The subject-matter of claim 1 is therefore not new (Article 33(2) PCT).

5. The subject-matter of claims 2-7, 9, 10 is known from the prior art documents cited in the search report or is common knowledge for the man skilled in the art and indeed for:

- (i) Claim 2 (carrier is plate-like), see document D1 for example fig. 2.
- (ii) Claim 3 (thick film layer), thick film layer is only one common possibility in the field of electrical heating.
- (iii) Claim 4 (raised and lowered parts), see document D2, fig. 10, 12, ref. 33, 35.
- (iv) Claim 5 (medium for heating), it is self-understanding that some air is taking place between ref. 35 and 31 fig. 10 document D2.
- (v) Claim 6 (insulating layer), see D1, fig. 7, ref. 54, col. 8, line 19.
- (vi) Claim 7 (support, electrically insulating material), see D1, fig. 7, ref. 55, col. 8, line 20.
- (vii) Claim 9 (Support member, electrically insulating material), see D1, fig. 7, ref. 55, col. 8, ref. 22.
- (viii) Claim 10 (plate-like). see D1, fig. 2, 7.

The subject-matter of claims 2, 6, 7, 9, 10 is therefore not new (Art. 33(2) PCT), and the subject-matter of claims 3-5 does not involve an inventive step (Art. 33(3) PCT)

6. The terms "like" in "track-like", "plate-like", "substantially" used in claim 1, 2, 6, 8, 9, 10 are vague and unclear and leave the reader in doubt as to the meaning of the technical feature to which they refer, thereby rendering the definition of the subject-matter of said claim unclear, Article 6 PCT.

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These terms must be therefore be removed.

7. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1, D2 is not mentioned in the description, nor are these documents identified therein.

8. The industrial applicability of the subject-matter of claims 1-8 appears to be evident. Consequently the claims 1-10 fulfill the requirements of Article 33(4) PCT.

Claims

EPO - DG 1

1. Heating assembly, comprising:
 - a carrier (1, 6, 7, 11, 14) with a heating surface,
 - 5 - at least one heating element (3, 9, 12, 16) arranged on the carrier (1, 6, 7, 11, 14) on the side opposite to the heating surface, and
 - an at least substantially form-retaining support member (4, 10, 13, 17) engaging on the carrier (1, 6, 7, 11, 14) on the side of the opposite to the heating surface,
 - characterized in that**
 - 10 the heating element (3, 9, 12, 16) is a track-like electrical resistor, and the carrier (1, 6, 7, 11, 14) is flexible.
2. Heating assembly as claimed in claim 1, **characterized in that** the carrier (1, 6, 7, 11, 14) is plate-like.
- 15 3. Heating assembly as claimed in claim 1 or 2, **characterized in that** the track-like electrical resistor (3, 9, 12, 16) is formed by a thick film layer.
4. Heating assembly as claimed in any of the foregoing claims, **characterized in**- 20 **that** the carrier (1, 6, 7, 11, 14) is provided with raised and lowered parts.
- 5. Heating assembly as claimed in any of the foregoing claims, **characterized in**- that** the carrier (1, 6, 7, 11, 14) is formed by two carrier parts (6, 7) which are placed against each other and between which there is defined a passage (8) for a medium for
 - 25 heating.
- 6. Heating assembly as claimed in any of the foregoing claims, **characterized in**- that** the track-like electrical resistor (3, 9, 12, 16) is connected to the carrier (1, 6, 7, 11, 14) via an insulating layer (2).
- 30 7. Heating assembly as claimed in any of the foregoing claims, **characterized in**- that** the support member (4, 10, 13, 17) is manufactured from an electrically insulating material.

8. Heating assembly as claimed in any of the foregoing claims, **characterized in that** the support member (4, 10, 13, 17) is designed such that it only engages on the carrier (1, 6, 7, 11, 14) at positions where this latter is not provided with the track-like electrical resistor (3, 9, 12, 16).

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9. Heating assembly as claimed in any of the foregoing claims, **characterized in that** the support member (4, 10, 13, 17) engages on the track-like electrical resistor (3, 9, 12, 16) via an electrically insulating material.

10 10. Heating assembly as claimed in any of the foregoing claims, **characterized in that** the support member (4, 10, 13, 17) is plate-like.